

can be incremented or decremented based on sensed atrial and ventricular signal patterns. Applicant acknowledges that the Peterson et al. reference discloses such a counter that can be incremented or decremented, and also notes another similar counter disclosed in Peterson et al. in the paragraph  
5 beginning at column 19, line 52, called the AF\* Evidence Counter.

Although each of these counters in the Peterson et al. reference can be incremented or decremented, the criteria for incrementing or decrementing these counters are different from that set forth in independent claim 12 of the present application. As stated in the last claim element of claim 12, additional  
10 *intervals* are compared to the tachycardia limit value and a non-tachycardia indication is generated, which reduces the recorded number (count) of indications of atrial tachycardia by one if at least one of the additional intervals during the pacemaker interval is longer than the tachycardia limit value.

In the subject matter of claim 12, therefore, the criterion for  
15 decrementing the count representing indications of atrial tachycardia is based on measurement of an interval, rather than on the detection of a particular event, or the detection of a particular number of events, as in the Peterson et al. reference, and moreover is a very simple "yes" or "no" criterion, and therefore the overall procedure for generating the count representative of  
20 atrial tachycardia indications is very simple, and thus much less prone to error.

As explained in the aforementioned paragraph beginning at column 19, line 52 in the Peterson et al. reference, the AF\* Evidence Counter is decremented if the number of atrial events or P count in the current R-R  
25 interval is one and the current beat code is the same as the previous beat code. This is merely an event counting operation, and does not involve any interval measurement or interval comparison as a decrementation criterion.

Decrementing of the AF/AT evidence counter in the Peterson et al. reference is much more complicated. The basic operation of the AF/AT  
30 evidence counter in the Peterson et al. reference begins at column 24, line 18, and the AF/AT evidence counter criterion are described in the paragraph beginning at column 24, line 30. These criterion involve several further

criterion, namely the Sinus Rhythm Counter Criterion and the Far Field R-Wave Criterion. Each of these criterion, in turn, are used to control respective counters, and the respective counts of these further counters are then used, in various combinations and according to various rules, to yield the AF/AT evidence counter criterion. The various conditions resulting in incrementation or decrementation of the AF/AT evidence counter are described in the paragraph beginning at column 24, line 51 and proceed through column 25, line 28 of the Peterson et al. reference. Again, in each instance, it is merely a combination of different counts that results in incrementation or decrementation, and there is no interval measurement or interval comparison, as set forth in claim 12 of the present application.

Applicant agrees that the count of these counters in the Peterson et al. reference is used as a basis for determining when a mode switch should be undertaken from a tracking mode to a non-tracking mode, or vice versa, and the fact that these counters can be decremented in the Peterson et al. reference does add a further level of protection against the occurrence of incorrect mode switching. Nevertheless, the criteria employed for this purpose in the Peterson et al. reference, despite in some circumstances producing a decrement in the count, are not the same as the criterion set forth in claim 12 of the present application. As noted above, the criterion employed in the subject matter of claim 12 is extremely simple, and therefore much less prone to error or falsification.

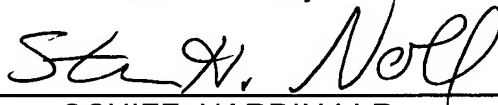
Therefore, although the Peterson et al. reference does disclose the concept of decrementing, under certain conditions, the count of a counter that is used as a basis for triggering a mode switch between tracking and non-tracking modes, the Peterson et al. reference does not disclose decrementing the counter under the same conditions as in claim 12 of the application, and therefore the Peterson et al. reference does not anticipate claim 12.

Claims 15 and 19 add further structure to the novel combination of claim 12, and therefore claims 15 and 19 are not anticipated by the Peterson et al. reference for the same reasons discussed above in connection with claim 12.

Applicant also notes that Figures 13 and 14 in the Peterson et al. reference show various types of intervals that are monitored, and which can enter into a logic decision in the Peterson et al. pacemaker for controlling mode switching. Those intervals, however, are not monitored for the purpose of altering the count of either the AF\* evidence counter or the AF/AT evidence counter, but are used *in addition to* the respective counts of those counters to make a decision as to when mode switching is appropriate. This is further evidence that the Peterson et al. reference does not anticipate the subject matter of claim 12 since, when Peterson et al. disclose monitoring various cardiac intervals, that monitoring is *not used* to alter the count of a counter, but is used as a separate criterion, *in addition to the counter count*, for deciding when a mode switch should occur. This is described for example, at column 33, lines 47-62 in the Peterson et al. reference.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is therefore respectfully requested.

Submitted by,



(Reg. 28,982)

SCHIFF, HARDIN LLP

**CUSTOMER NO. 26574**

Patent Department

6600 Sears Tower

233 South Wacker Drive

Chicago, Illinois 60606

Telephone: 312/258-5790

Attorneys for Applicant.